

# Receiving Report

Date: 13-01-30 Batch No: 124443  
 Supplier: ThyssenKrupp Part P/O: 18936  
 Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☒ No ☐  
 Receipt: Cash ☒ Cr ☐

Release Note Attached: Yes ☒ No ☐  
 Waybill Attached: Yes ☒ No ☐  
 Shipment Complete: Yes ☒ No ☐

QC Inspection 14 13/01/30

Work Order N/A

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12 SP

Production/Admin: 13-01-30  
 Date  
 Received/Costing  
 Initial SP

Location

H:\FORMS\Purchasing\approved purch\RECREPORT Rev D

## Purchase Order Receipt Listing

Wednesday, January 30, 2013 7:55:07 AM

All Vendors PO ID PO18936 Receipt Dates from  
 All Item ID/GL/WOs All Rec. Employees All C  
 Grouped by Vendor ID

Purchase Order ID/ Curt Type	Line Nbr/ Insp	Project ID	Reference/ Description/ Cert Std	P
Vendor ID/Vendor Name	VC-COP001	ThyssenKrupp		
PO18936	1		M6061T6B0.250X02.1	
CAD	No		500	
			6061-T6 Bar 0.25 x	
			2.50	
			124443	
	2		M6061T6B0.250X04.000	
	No		6061-T6 Bar 250 x	
			4.00	
			124443	
	3		M6061T6B0.375X01.000	
	No		6061T6 BAR .375 x	
			1.00	
			124443	
	4		M6061T6B0.375X03.000	
	No		6061T6 BAR .375 X	
			3.00	
			124443	
	5		M6061T6B0.500X02.500	
	No		6061-T6 Bar .500 x	
			2.50	
			124443	
	6		M6061T6B0.750X00.750	
	No		6061-T6 Bar .750 x	
			.750	
			124443	

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M/ Stock U/M	Required Date	Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Vendor ID \ Vendor Name	VC-COP001	Thyssenkrupp Materials CA Ltd										
PO18936	7		M6061T6B0.750X04. f		1/30/2013	1/30/2013		12.0000	\$7.20	0.0000	0	\$86.44
			000									
CAD	No		6061-T6 Bar .750 x f		12.0000	DESI02			\$86.44	0.0000	0	
			4.00									
			124443									
	8		M6061T6B00750X00 f		1/30/2013	1/30/2013		100.0000	\$0.36	0.0000	0	\$35.68
			.125									
	No		6061-T6 Bar .750 x f		100.0000	DESI02			\$35.68	0.0000	0	
			.125									
			124443									
	9		M6061T6B1.000X02. f		1/30/2013	1/30/2013		36.0000	\$4.87	0.0000	0	\$175.49
			000									
	No		6061-T6 Bar 1.00 x f		36.0000	DESI02			\$175.49	0.0000	0	
			2.00									
			124443									
	10		M6061T6B1.000X02. f		1/30/2013	1/30/2013		12.0000	\$5.86	0.0000	0	\$70.36
			500									
	No		6061-T6 Bar 1.00 x f		12.0000	DESI02			\$70.36	0.0000	0	
			2.50									
			124443									
	11		M6061T6B1.000X12. f		1/30/2013	1/30/2013		12.0000	\$28.38	0.0000	0	\$340.55
			000									
	No		6061-T6 Bar 1.00 x f		12.5000	DESI02			\$340.55	0.0000	0	
			12.00									
			124443									
	12		M6061T6B1.000X15. f		1/30/2013	1/30/2013		12.5000	\$47.98	0.0000	0	\$599.79
			000									
	No		6061-T6 Bar 1.00 x f		12.5000	DESI02			\$599.79	0.0000	0	
			15.00									
			124443									
	13		M6061T6B1.250X01. f		1/30/2013	1/30/2013		48.0000	\$3.69	0.0000	0	\$176.91
			250									
	No		6061-T6 Bar 1.25 x f		48.0000	DESI02			\$176.91	0.0000	0	
			1.25									
			124443									
	14		M6061T6B2.000X02. f		1/30/2013	1/30/2013		36.0000	\$9.44	0.0000	0	\$339.72
			000									
	No		6061-T6 Bar 2.00 x f		36.0000	DESI02			\$339.72	0.0000	0	
			2.00									
			124443									

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M/ Stock U/M	Required Date Required Qty	Recv Date/ Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ Reject Qty	Book Amt
Vendor ID \ Vendor Name VC-COP001 Thyssenkrupp Materials CA Ltd											
PO18936	15		M6061T6B1.500X01.f		1/30/2013	1/30/2013	36.0000	\$4.57	0.0000	0	\$164.64
			250								
CAD	No		6061-T6 Bar 1.50 x f		36.0000	DESI02		\$164.64	0.0000	0	
			125								
			124443								
	16		M6061T6B2.000X08.f		1/30/2013	1/30/2013	12.0000	\$37.86	0.0000	0	\$454.31
			000								
	No		6061-T6 BAR 2.00' f		12.0000	DESI02		\$454.31	0.0000	0	
			X 8.00"								
			124443								
	17		M6061T6B1.500X02.f		1/30/2013	1/30/2013	36.0000	\$8.88	0.0000	0	\$319.62
			500								
	No		6061-T6 Bar 1.50 x f		36.0000	DESI02		\$319.62	0.0000	0	
			250								
			124443								
Total Received Quantity:											432.5000
Total Qty to Inspect (PO U/M):											0.0000
Total Reject Quantity:											0.0000
Total Receipt Value:											\$2,916.28
Total Balance Due Quantity:											0.5000

# B I L L O F L A D I N G

No: PEC 805103

Ship From:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 905-738-9033

Ship Date 28Jan13 at 11:14 From PFW  
Probill  
Via VIM TRANSFER  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: ( 20115)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7

Ship To: ( 1)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7  
Tel: 613-632-9577 Fax: 613-632-1053

## B I L L O F L A D I N G

1) Our Order PEC-530434- 1 Your PO # 18936  
ALUMINUM FLAT BAR 6061-T6511

.250" x 2.50" X 240.0000"

Heat Number  
201300292

Tag No  
144959

Quantity  
20 FT

PCS  
1

Wt LBS  
15

2) Our Order PEC-530434- 2 Your PO # 18936  
ALUMINUM FLAT BAR 6061-T6511

.250" x 4.00" X 144.0000"

Heat Number  
18526

Tag No  
144960

Quantity  
12 FT

PCS  
1

Wt LBS  
14

3) Our Order PEC-530434- 3 Your PO # 18936  
ALUMINUM FLAT BAR 6061-T6511

.375" x 1.00" X 144.0000"

Heat Number  
Z00243003

Tag No  
144961

Quantity  
12 FT

PCS  
1

Wt LBS  
5

4) Our Order PEC-530434- 4 Your PO # 18936  
ALUMINUM FLAT BAR 6061-T6511

.375" x 3.00" X 144.0000"

Heat Number  
12091081A

Tag No  
144962

Quantity  
12 FT

PCS  
1

Wt LBS  
16

5) Our Order PEC-530434- 5 Your PO # 18936  
ALUMINUM FLAT BAR 6061-T6511

.50" x 2.50" X 144.0000"

Heat Number  
201222754

Tag No  
144963

Quantity  
12 FT

PCS  
1

Wt LBS  
17

Page: 1 ....Continued

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.  
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

REÇU EN BONNE CONDITIONS / RECEIVED IN GOOD CONDITION

DATE

Sp 13-01-30

## B I L L O F L A D I N G

No: PEC 805103  
Ship Date 28Jan13 at 11:14 From PFW

Ship From: THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 905-738-9033

Probill  
Via VIM TRANSFER  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: ( 20115)  
DART AEROSPACE

Ship To: ( 1)  
DART AEROSPACE

## B I L L O F L A D I N G

5) Our Order PEC-530434- 6 Your PO # 18936  
ALUMINUM SQUARE BAR 6061-T6511  
.750" X 144.0000"

Heat Number Tag No  
12090031A 144964

Quantity PCS Wt LBS  
12 FT 1 8

7) Our Order PEC-530434- 7 Your PO # 18936  
ALUMINUM FLAT BAR 6061-T6511  
.750" x 4.00" X 144.0000"

Heat Number Tag No  
201221010 144965

Quantity PCS Wt LBS  
12 FT 1 43

8) Our Order PEC-530434- 8 Your PO # 18936  
ALUMINUM FLAT BAR 6061-T6511  
.125" x .750" X 240.0000"

Heat Number Tag No  
12110331A 144966

Quantity PCS Wt LBS  
100 FT 5 11

9) Our Order PEC-530434- 9 Your PO # 18936  
ALUMINUM FLAT BAR 6061-T6511  
1.00" x 2.00" X 144.0000"

Heat Number Tag No  
201221186 144967

Quantity PCS Wt LBS  
36 FT 3 86

10) Our Order PEC-530434- 10 Your PO # 18936  
ALUMINUM FLAT BAR 6061-T6511  
1.00" x 2.50" X 144.0000"

Heat Number Tag No  
2BS870 144968

Quantity PCS Wt LBS  
12 FT 1 35

11) Our Order PEC-530434- 11 Your PO # 18936  
ALUMINUM FLT BAR ECONOPLT 6061-T6511  
1.00" X 12.00" X 144.5000"

Heat Number Tag No

Quantity PCS Wt LBS

Page: 2 ....Continued

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
RAPPORTÉES IMMÉDIATEMENT.  
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DATE

50 B01-30-

## B I L L O F L A D I N G

No: PEC 805103

Ship From:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 905-738-9033

Ship Date 28Jan13 at 11:14 From PFW  
 Probill  
 Via VIM TRANSFER  
 FOB CONCORD  
 Frt PREPAID  
 Route 0- 0 Manifest  
 Vhcle Trailer  
 Slp STAN IVERS (905-532-1350)  
 Sold To: (20115)  
 DART AEROSPACE

Ship To: (1)  
 DART AEROSPACE

## B I L L O F L A D I N G

201221564

145079

12 ' .5000 "

170

12) Our Order PEC-530434- 12 Your PO # 18936  
 ALUMINUM PLATE 6061-T651  
 1.00" THICK X 15.0000" X 144.5000"  
 Heat Number Tag No  
 09/10/026C0 144593

Quantity PCS Wt LBS  
 15.05 SFT 1 219

13) Our Order PEC-530434- 13 Your PO # 18936  
 ALUMINUM SQUARE BAR 6061-T6511  
 1.250" X 144.0000"  
 Heat Number Tag No  
 2BR922 144969

Quantity PCS Wt LBS  
 48 FT 4 88

14) Our Order PEC-530434- 14 Your PO # 18936  
 ALUMINUM FLAT BAR 6061-T6511  
 1.250" x 1.50" X 144.0000"  
 Heat Number Tag No  
 Z00261029 144970

Quantity PCS Wt LBS  
 36 FT 3 80

15) Our Order PEC-530434- 15 Your PO # 18936  
 ALUMINUM SQUARE BAR 6061-T6511  
 2.00" X 144.0000"  
 Heat Number Tag No  
 201219894 144971

Quantity PCS Wt LBS  
 36 FT 3 172

16) Our Order PEC-530434- 16 Your PO # 18936  
 ALUMINUM FLAT BAR 6061-T6511  
 2.00" X 8.00" X 144.0000"  
 Heat Number Tag No  
 201201586 144972

Quantity PCS Wt LBS  
 12 FT 1 224

17) Our Order PEC-530434- 17 Your PO # 18936  
 ALUMINUM FLAT BAR 6061-T6511  
 1.50" x 2.50" X 144.0000"

Page: 3 ....Continued

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
 RAPPORTÉES IMMÉDIATEMENT.

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RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.  
 MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

SEP 13-01-30

## B I L L O F L A D I N G

No: PEC 805103

Ship From:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 905-738-9033

Ship Date 28Jan13 at 11:14 From PFW  
 Probill  
 Via VIM TRANSFER  
 FOB CONCORD  
 Frt PREPAID  
 Route 0- 0 Manifest  
 Vhcle Trailer  
 Slp STAN IVERS (905-532-1350)  
 Sold To: ( 20115)  
 DART AEROSPACE

Ship To: ( 1)  
 DART AEROSPACE

## B I L L O F L A D I N G

Heat Number  
 2BR823

Tag No  
 144973

Quantity  
 36 FT

PCS  
 3

Wt LBS  
 158

TOTAL: Tags 17 PCS 32

LBS  
 1361

\*\*\* Chemical Analysis \*\*\*

Heat Number  
 09/10/026C0  
 12090031A  
 12091081A  
 12110331A  
 18526  
 201201586  
 201219894  
 201221010  
 201221186  
 201221564  
 201222754  
 201300292  
 2BR823  
 2BR922  
 2BS870  
 Z00243003  
 Z00261029

SP 13-01-30

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
 TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*  
 \*\* REFERENCED ON IT \*\*

TOTAL 4 BDLS G.W. 1807 LBS

Page: 4 ....Continued

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
 RAPPORTÉES IMMÉDIATEMENT.

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RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.  
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REÇU EN BONNE CONDITIONS / RECEIVED IN GOOD CONDITION

DATE

## B I L L O F L A D I N G

No: PEC 805103

Ship From:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 905-738-9033

Ship Date 28Jan13 at 11:14 From PFW  
Probill  
Via VIM TRANSFER  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: ( 20115)  
DART AEROSPACE

Ship To: ( 1)  
DART AEROSPACE

## B I L L O F L A D I N G

ITEMS (1,8) BDL  
ITEMS (2-7 AND 9,10 AND 13-17) BDL  
ITEM (11) BDL  
ITEM (12) BDL

\*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA  
CONCORD, ONT.\* \*\*\* 9:00 AM TO 4:00 PM \*\*\*  
\*\*\*\* TEL. 800-926-2600 \*\*\*\*  
\*\*\*\*\*  
\* WE STOCK STAINLESS STEEL \*  
\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*  
\*\*\*\*\*  
\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
ADDED TO EVERY ORDER.\*\*\*

Page: 5 .... Last

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.  
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

REÇU EN BONNE CONDITIONS / RECEIVED IN GOOD CONDITION

DATE



# THYSSENKRUPP MATERIALS NA

## Certificate of Mill Test Results

**DART AEROSPACE**  
ALUMINUM EXTR. BAR 6061-T6511  
250" x 2.50" x 240.0000"  
PART NO.

PO/Ref 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by: \_\_\_\_\_

BL PEC-805103-001

28Jan13  
Pg 1/1



**SERVICE CENTER METALS**  
5850 Quality Way  
Prince George, VA 23875

### CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

OUR ORDER NUMBER	ITEM
166508	1

BILL TO ThyssenKrupp Materials NA	NAVJEST NUMBER 178979	DIE NUMBER RB0074	DATE OF SHIPMENT 1/16/2013	CERTIFICATION ASTM-B221-12 Stencil/Continuous
SHIP TO ThyssenKrupp Materials NA PEC	CUSTOMER PO PEC-244917	ALLOY/TEMPER 6061-T6511	SALESPERSON David Schroeder	SPECIFICATION AMS-QQA-200/8
Quantity Certified 1,514 lbs	103 pcs	CUSTOMER PART NUMBER RB0074 X 240	DESCRIPTION SCRB .250X2.500	

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown.

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6

#### Mechanical Properties

Tests	Lot No.	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation
1	201300292	01/12/13	44.9	42.2	14.0
2	201300292	01/12/13	42.4	40.0	12.9

13/04/30

DAS 14 88

#### Chemical Composition for Aluminum Alloy 6061

Cast Number	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Others Each	Total	Melt Source:
122312	6061	0.63	0.18	0.17	0.00	0.85	0.05	0.00	0.01	98.11	0.05	0.15	Caster (Hydro)

*Calvin L. Wiggins*

Calvin L. Wiggins, Director of Quality & Technical Services

Rev. 9/23/11 - UMS

Print Date: 1/16/2013

# THYSSENKRUPP MATERIALS NA

DART AEROSPACE

ALUMINUM PLAT BAR 6061-T6511  
250" x 4.00" X 144,000"  
PART NO.

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Certificate of Mill Test Results

BL PEC-805103-002

28 Jan 13  
Pg 1/1



TEL: (416) 745-4444 FAX: (416) 745-0925 1-800-668-7210  
411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4

<http://www.extrudex.com>

## MILL TEST REPORT

BILL TO: THYSSENKRUPP MATERIALS, NA  
SHIP TO: THYSSENKRUPP MATERIALS, NA  
SO DESCRIPTION: 250"x4" FB  
Chart Date: 1  
CUSTOMER PO: PEC-242550  
CUSTOMER PART NUMBER: 1-250-4000  
DIE NUMBER: 0.49 S 2215  
ALLOY TEMPER: 8061 T6511  
DATE OF SHIPMENT: 10/22/2012  
SALESMAN: FORBES DODWELL  
EXTRUDEX ORDER NO.: 151040  
MANIFEST NO.: 276558  
CERTIFICATION: MADE IN CANADA  
MILL TEST ASTM B221-12

## Mechanical Properties

Lot	Alloy	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation	Hardness	Conductivity
A.11	6061	Oct/16/12	43.1	39.5	13.60	88.5, 88.2, 88.0	

## Chemical Composition

Cast Number	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Al	Other
A.11 18526 6061	0.55	0.23	0.21	0.06	0.83	0.04	0.00	0.01	0.01	0.00	0.00

David Natale  
Quality Control Manager

DA 14 89

13/01/36

# THYSSENKRUPP MATERIALS NA

## Certificate of Mill Test Results

DART AEROSPACE

ALUMINUM FLAT BAR 6061-T6511  
.375" x 1.00" X 144.0000"  
PART NO.

PO/Rel 18936

We certify that this is a true copy of the report  
furnished by the producer of the metal, or data  
resulting from tests made in approved labs.

BL PEC-805103-003

28Jan13

Pg 1/2

Signed by: \_\_\_\_\_

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
5205 KAISER DRIVE  
KALAMAZOO, MI 49048

### CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

CUSTOMER PO NUMBER: PEC-241958-11		CUSTOMER PART NUMBER: ALREC00208		PRODUCT DESCRIPTION: .375 X 1.000 SC RECT BAR	
KAISER ORDER NUMBER: 627965	LINE ITEM: 011	SHIP DATE: 10/02/2012	KAISER LOT NUMBER: Z00243003	ALLOY: 6061	TEMPER: T6511
WEIGHT SHIPPED: 1016.000 LB	QUANTITY: 192.000 PCS	B/L NUMBER: 604574	DIAM/DAF/THKNS: 	WIDTH: 	LENGTH: 12.000 FT
SHIP TO:  THYSSENKRUPP MATERIALS NA 2821 LANGSTAFF ROAD CONCORD, ON L4K 5C6 CANADA			SOLD TO:  THYSSENKRUPP MATERIALS NA 2821 LANGSTAFF ROAD CONCORD, ON L4K 5C6 CANADA		

### Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONDUCT.	BEND
Z0C243003	0001	1	44.7	41.0	17.8	RE 91	N/A	N/A
Z0C243003	0001	2	46.2	42.5	17.0	RE 91	N/A	N/A
Z0C243003	0001	3	44.6	40.9	13.3	RE 90	N/A	N/A
Z0C243003	0001	4	44.6	41.0	18.2	RE 92	N/A	N/A
Z0C243003	0001	5	44.9	41.2	17.2	RE 93	N/A	N/A
Z0C243003	0001	6	44.7	41.1	17.9	RE 92	N/A	N/A
Z0C243003	0001	7	45.0	41.4	18.0	RE 92	N/A	N/A

### Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	C.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	C.00	0.00
102012	.69	.26	.23	.08	.94	.09	.02	.02	.00	.00	.00	.01	.03

### Applicable Requirements:

ASTM-B221-12 STENCILED ASME-SB221 1998 SECT II AMS-QQ-A-200/8 (2007) UNS#A96061  
(T6511 also conforms to T6-not applicable to other tempers)

### Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA

DAS  
14  
2-83 13/01/30

Plant Serial: 00062347  
Kaiser Order Number: 627965  
Line Item: 011

# THYSSENKRUPP MATERIALS NA

DART AEROSPACE

ALUMINUM FLAT BAR 6061-T6511  
.375" x 1.00" X 144.0000"  
PART NO.

PO/Rel 18936

We certify that this is a true copy of the report  
furnished by the producer of the metal, or data  
resulting from tests made in approved labs.

## Certificate of Mill Test Results

BL PEC-805103-003

28Jan13

Signed by: \_\_\_\_\_ Pg 2/2

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
5205 KAISER DRIVE  
KALAMAZOO, MI 49048

*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

### CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Calvin Latting, Quality & Technology Manager

*Calvin Latting*

Plant Serial: 00062347

Kaiser Order Number: 627965

Line Item: C11

Page 2 of 2

# THYSSENKRUPP MATERIALS NA

DART AEROSPACE

ALUMINUM FLAT BAR 6061-T6511

.375" x 3.00" X 144.0000"

PART NO.

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

## Certificate of Mill Test Results

BL PEC-805103-004

28Jan13

Pg 1/1

Signed by: \_\_\_\_\_

# CAN ART

ALUMINUM EXTRUSION INC.

## Material Test Report

Manifest: 252270

Ship To: ThyssenKrupp Materials NA

2821 Langstaff Road

Concord, ON L4K 5C6

Ticket:

5280548

Our Order: **388867 - 5**

Cust P.O.: 242137

Die: ES05677

Part: 05677-000-144

Alloy Temper: 6061 T6511

Description: .375 x 3.000

Print Date: 10/3/12

### Chemical Composition Range

	<u>Si</u>	<u>Fe</u>	<u>Cu</u>	<u>Mn</u>	<u>Mg</u>	<u>Cr</u>	<u>Zn</u>	<u>Ti</u>	<u>OtherEach</u>	<u>OtherTotal</u>
6061										
Min	0.40		0.15		0.8	0.04				
Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15

### Mechanical Properties

Strength ksi

<u>Sample ID</u>	<u>Cast #</u>	<u>Lot #</u>	<u>Test Date</u>	<u>Ultimate Tensile</u>	<u>Yield 2% offset</u>	<u>Elongation 2" gage length</u>
131939	12091081A	A11	10/2/12	46.14	42.37	9.9

Applicable Specifications ASTMB221-08 QQA200/8

Country of Origin: 85 Parkshore Drive, Brampton, Ontario CANADA L6T 5M1



13/01/30

Can Art Aluminum Extrusion Inc. certifies that materials shipped under this order have been inspected and tested in accordance with Aluminum Association and agreed upon customer specifications. Can Art assumes no liability for additional costs which may be incurred during the customer's manufacture and sale of its products, and is subject only to the replacement of any materials not within agreed upon specifications provided written notification is received by Can Art within 30 days from the date of shipment.

Ray Hussain - Tensile Testing

Authorized: \_\_\_\_\_

Evan Eng, Quality Assurance Mgr.

# THYSSENKRUPP MATERIALS NA

PO/Rel 18936

DART AEROSPACE  
ALUMINUM FLAT BAR 6061-T6511  
50" x 2.50" x 144.0000"  
PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results  
BL PEC-805103-005  
28Jan13  
Pg 1/1



SERVICE CENTER METALS  
5850 Quality Way  
Prince George, VA 23875

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

OUR ORDER NUMBER	ITEM
166119	2

BL TO  
ThyssenKrupp Materials NA  
SHIP TO  
ThyssenKrupp Materials NA PEC  
Quantity Certified 1,200 lbs 68 pcs

MANIFEST NUMBER 178618  
CUSTOMER PO PEC-244747  
CUSTOMER PART NUMBER RB0097

DE NUMBER RB0097  
ALL OV/TEMPER 6061-T6511  
SALESPERSON David Schroeder

DATE OF SHIPMENT 1/11/2013

CERTIFICATION ASTM-B221-12 StencilContinuous  
SPECIFICATION AMS-QQA-200/8

DESCRIPTION SCRB, 500x2, 500

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown.

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6

### Mechanical Properties

Tests	Lot No.	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation
1	201222754	01/09/13	43.4	42.6	12.9
2	201222754	01/09/13	45.6	43.8	14.7
3	201222754	01/09/13	43.2	42.2	12.1
4	201222754	01/09/13	45.1	43.7	15.8
5	201222754	01/09/13	45.2	43.9	13.3
6	201222754	01/09/13	46.4	45.1	13.2

DAS 14 13/01/36

### Chemical Composition for Aluminum Alloy 6061

Cast Number	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Others	Melt Source:
113025	6061	0.71	0.35	0.32	0.10	0.85	0.11	0.08	0.02	97.46	0.05	United States of America
C67R0330	6061	0.63	0.16	0.18	0.01	0.85	0.06	0.01	0.01	98.09	0.05	United States of America
C67R0331	6061	0.61	0.16	0.17	0.02	0.85	0.06	0.01	0.02	98.10	0.05	United States of America

Print Date: 1/11/2013

Calvin J. Wilkins, Director of Quality & Technical Services

Rev. 8/23/11 - UMS

# THYSSENKRUPP MATERIALS NA

DART AEROSPACE

ALUMINUM SQUARE BAR 6061-T6511

.750" X 144.0000"

PART NO.

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

## Certificate of Mill Test Results

BL PEC-805103-006

28Jan13

Pg 1/1

Signed by: \_\_\_\_\_

# CAN ART

ALUMINUM EXTRUSION INC.

## Material Test Report

Manifest: **252539**

Ship To: ThyssenKrupp Materials NA

2821 Langstaff Road

Concord, ON L4K 5C6

Ticket:

5280930

Our Order: **388937 - 5**

Cust P.O.: 242246

Die: ES05504

Part: 05504-000-144

Alloy Temper: 6061 T6511

Description: .750 x .750

Print Date: 10/10/12

### Chemical Composition Range

	<u>Si</u>	<u>Fe</u>	<u>Cu</u>	<u>Mn</u>	<u>Mg</u>	<u>Cr</u>	<u>Zn</u>	<u>Ti</u>	<u>OtherEach</u>	<u>OtherTotal</u>
6061										
Min	0.40		0.15		0.8	0.04				
Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15

### Mechanical Properties

Strength ksi

<u>Sample ID</u>	<u>Cast #</u>	<u>Lot #</u>	<u>Test Date</u>	<u>Ultimate Tensile</u>	<u>Yield 2% offset</u>	<u>Elongation 2" gage length</u>
131947	12090031A	A11	10/2/12	41.12	37.66	9.9

Applicable Specifications ASTMB221-08 QQA200/8

Country of Origin: 85 Parkshore Drive, Brampton, Ontario CANADA L6T 5M1

DAS  
14  
9-83

13/6/30

Can Art Aluminum Extrusion Inc. certifies that materials shipped under this order have been inspected and tested in accordance with Aluminum Association and agreed upon customer specifications. Can Art assumes no liability for additional costs which may be incurred during the customer's manufacture and sale of its products, and is subject only to the replacement of any materials not within agreed upon specifications provided written notification is received by Can Art within 30 days from the date of shipment.

Ray Hussain - Tensile Testing

Authorized: \_\_\_\_\_

  
Evan Eng, Quality Assurance Mgr.

# THYSSENKRUPP MATERIALS NA

PO/Rel 18936

Certificate of Mill Test Results

BL PEC-805103-007

28Jan13  
Pg 1/1

DART AEROSPACE  
ALUMINUM PLAT BAR 6061-T6511  
750" x 4.00" X 144.0000"  
PART NO.

We certify that this is a true copy of the report  
furnished by the producer of the metal, or data  
resulting from tests made in approved labs.

Signed by: \_\_\_\_\_



SERVICE CENTER METALS  
5850 Quality Way  
Prince George, VA 23875

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

OUR ORDER NUMBER	ITEM
163798	2

BILL TO

ThyssenKrupp Materials NA

MANIFEST NUMBER

176106

ONE NUMBER

RB0119

DATE OF SHIPMENT

12/7/2012

CERTIFICATION

ASTM-B221-12 StencilContinuous

SHIP TO

ThyssenKrupp Materials NA PEC

CUSTOMER PO

PEC-244036

ALLOY / TEMPER

6061-T6511

SALESPERSON

David Schroeder

SPECIFICATION

AMS-QQA-200/8

Quantity Certified

1,270 lbs

30 pcs

CUSTOMER PART NUMBER

RB0119

DESCRIPTION

SCRB .750x4.000

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. SCM extrusions are manufactured in the USA.

Items produced and certified as 6061-T6511  
also meet the requirements of 6061-T6

### Mechanical Properties

Tests

Lot No.

Test Date

Ultimate Tensile  
Strength (KSI)

Yield Strength  
(KSI)

Percent  
Elongation

1

201221010

12/03/12

47.1

44.0

15.7

DAS  
14  
13/01/30

### Chemical Composition for Aluminum Alloy 6061

Cast Number	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Each	Total	Others	Melt Source:
C29J1069	6061	0.72	0.39	0.31	0.10	0.88	0.09	0.01	0.02	97.48	0.05	0.15		United States of America

Print Date: 12/7/2012

Calvin J. Wiggins, Director of Quality & Technical Services

Rev 9/23/11 - UMS



# THYSSENKRUPP MATERIALS NA

PO/Rel 18936

## Certificate of Mill Test Results

BL PEC-805103-008

28 Jan 13  
Pg 1/1

DART AEROSPACE  
ALUMINUM FLAT BAR 6061-T6511  
1.25" x .750" x 240.0000"  
PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

TEL: (416) 745-4444 FAX: (416) 745-0925 1-800-668-7210  
411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4

<http://www.extrudex.com>



A: LHMTHM

### MILL TEST REPORT

BILL TO: THYSSENKRUPP MATERIALS, NA  
SHIP TO: THYSSENKRUPP MATERIALS, NA  
SO DESCRIPTION: 125" X .750" FB  
Can Code: 1 0.64  
CUSTOMER PO: PEC-243994  
CUSTOMER PART NUMBER: 1-125-750  
DIE NUMBER: S 4642  
DATE OF SHIPMENT: 12/6/2012  
EXTRUDEX ORDER NO.: 152624  
MANIFEST NO.: 279554  
ALL OY: 6061  
TEMPER: T6511  
SALESMAN: FORBES DODWELL  
PART DESCRIPTION: MADE IN CANADA  
CERTIFICATION: MILL TEST ASTM B221-12

### Mechanical Properties

Lot	Alloy	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation	Hardness	Conductivity
A.11	6061	Dec/03/12	41.9	37.2	12.20	87.1, 86.8, 87.0	

### Chemical Composition

Cast Number	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Ga	V	B	Zr	Bi	Pb	Sn	Sr	Co	Al	Other
A.11 12110331A 6061	0.55	0.16	0.20	0.01	0.80	0.08	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

David Natale  
Quality Control Manager

13/01/30  
DAS  
14  
89

1 - CUSTOMER COPY

MILL TEST REPORT

# THYSSENKRUPP MATERIALS NA

DART AEROSPACE

ALUMINUM FLAT BAR 6061-T6511  
1.00" x 2.00" x 144.0000"

PART NO.

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results  
BL PEC-805103-009  
28Jan13  
Pg 1/1



SERVICE CENTER METALS  
5850 Quality Way  
Prince George, VA 23875

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

OUR ORDER NUMBER	ITEM
164440	27

BILL TO ThyssenKrupp Materials NA	MANIFEST NUMBER 176543	DATE OF SHIPMENT 12/13/2012	CERTIFICATION ASTM-B221-12 StencilContinuous
SHIP TO ThyssenKrupp Materials NA PEC	CUSTOMER PO PEC-244211	ALLOY/TEMPER 6061-T6511	SPECIFICATION AMS-QQA-200/8
Quantity Certified 1,542 lbs	CUSTOMER PART NUMBER RB0124	DESCRIPTION SCRB 1.000x2.000	

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown.

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6

### Mechanical Properties

Tests	Lot No.	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation
91	201221186	12/05/12	49.0	45.8	15.0
92	201221186	12/05/12	47.5	44.2	16.7
93	201221186	12/05/12	48.4	45.1	14.7
94	201221186	12/05/12	48.9	45.3	15.3
95	201221186	12/05/12	48.9	45.4	13.9
96	201221186	12/05/12	48.9	45.5	15.0
97	201221186	12/05/12	49.0	45.8	15.0
98	201221186	12/05/12	47.5	44.2	16.7
99	201221186	12/05/12	48.4	45.1	14.7
100	201221186	12/05/12	48.9	45.3	15.3
101	201221186	12/05/12	48.9	45.4	13.9
102	201221186	12/05/12	48.9	45.5	15.0

### Chemical Composition for Aluminum Alloy 6061

Cast Number	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Others Each	Total	Melt Source:
1112148	6061	0.74	0.35	0.31	0.10	0.87	0.09	0.07	0.03	97.44	0.05	0.15	United States of America
1112157	6061	0.75	0.34	0.32	0.10	0.87	0.10	0.07	0.02	97.43	0.05	0.15	United States of America

Print Date: 12/13/2012

Calvin J. Wiggins, Director of Quality & Technical Services

Rev. 9/23/11 - UMS

# THYSSENKRUPP MATERIALS NA

PO/Rel 18936

DART AEROSPACE  
ALUMINUM PLAT BAR 6061-T6511  
1.00" x 2.50" x 144.0000"  
PART NO.

We certify that this is a true copy of the report  
furnished by the producer of the metal, or data  
resulting from tests made in approved labs.

Signed by: \_\_\_\_\_

Certificate of Mill Test Results  
BL PEC-805103-010  
281 am13  
Pg 1/1

## EXTRUDEX

ALUMINUM

TEL: (416) 745-4444 FAX: (416) 745-0925 1-800-668-7210  
411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4  
<http://www.extrudex.com>

### MILL TEST REPORT

BILL TO	Cert Code:	DATE OF SHIPMENT	EXTRUDEX ORDER NO.	MANIFEST NO.
THYSSENKRUPP MATERIALS, NA	1	11/19/2012	151534 - 6	278491
SHIP TO	CUSTOMER PO	ALLOY	TEMPER	SALESMAN
THYSSENKRUPP MATERIALS, NA	PEC-243029	6061	T6511	FORBES DODWELL
SO DESCRIPTION	CUSTOMER PART NUMBER	PART DESCRIPTION	CERTIFICATION	
1"x2.5" FB	1-1000-2500		MILL TEST ASTM B221-12	

### Mechanical Properties

Lot	Alloy	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation	Hardness	Conductivity
A.11	6061	Nov/14/12	43.0	39.3	13.50	91.0,90.8,91.3	

### Chemical Composition

Cast Number	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Ga	V	B	Zr	Bi	Pb	Sn	Sr	Co	Al	Other
A.11 2BS870 6061	0.59	0.16	0.21	0.03	0.89	0.07	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

David Natale  
Quality Control Manager

DAS  
14  
13/01/30

# THYSSENKRUPP MATERIALS NA

PO/Rel 18936

Signed by:

Certificate of Mill Test Results  
BL PEC-805103-011  
28Jan13  
Pg 1/1

DART AEROSPACE  
ALUMINUM FRT BAR ECONOPLT 6061-T6511  
1.00" X 12.00" X 144.5000"  
PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.



SERVICE CENTER METALS  
5850 Quality Way  
Prince George, VA 23875

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

OUR ORDER NUMBER	ITEM
164614	3

BILL TO	MANIFEST NUMBER	ONE NUMBER	DATE OF SHIPMENT	CERTIFICATION
ThyssenKrupp Materials NA	176547	PL0741	12/13/2012	ASTM-B221-12 StencilContinuous
SHIP TO	CUSTOMER PO	ALLOY / TEMPER	SALES PERSON	SPECIFICATION
ThyssenKrupp Materials NA PEC	PEC-244313	6061-T6511E	David Schroeder	AMS-QQA-200/8
Quantity Certified	2,032 lbs	12 pcs	DESCRIPTION	
			PL 1,000 x 12,000	

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. SCM extrusions are manufactured in the USA.

### Mechanical Properties

Tests	Lot No.	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation
1	201221564	12/10/12	50.1	46.7	14.7

24%  
DAS

13/01/30

### Chemical Composition for Aluminum Alloy 6061

Cast Number	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Each	Total	Melt Source:
1112080	6061	0.76	0.37	0.31	0.11	0.90	0.11	0.05	0.02	97.37	0.05	0.15	United States of America
1112157	6061	0.75	0.34	0.32	0.10	0.87	0.10	0.07	0.02	97.43	0.05	0.15	United States of America

Print Date: 12/13/2012

Calvin J. Wiggins, Director of Quality & Technical Services

Rev. 8/23/11 - UMS

# THYSSENKRUPP MATERIALS NA

PO/Rel 18936

ALUMINUM PLATE 6061-T651  
1.00" THICK X 15.0000" X 144.5000"  
PART NO.

We certify that this is a true copy of the report  
furnished by the producer of the metal, or data  
resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results  
BL PEC-805103-012  
28Jan13  
Pg 1/1

## TEST CERTIFICATE

Certificate No.: 1210LB5989

BUYER:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
COVINGTON  
LOUISIANA

Shipping Plank: UR45468  
Lot No.: 0870028C0  
Pilot No.: 2/1158562  
Release No.: R237458

Product: PLATE HEAT TREATED LUNCHED, 6061-T651 1" x 40.5" x 144.5"  
Dimension: 1" x 48.5" x 144.5"  
Alloy - Temper: 6061 - T651

Cust Order No.: PEC-242085  
HULAMIN Order No.: 225052E  
Combined Pilot No.: R126335

Case No.: P1001 PERIOD PERIOD

### MECHANICAL TEST RESULTS

Lot No.	Cast No.	Metal Id	Alloy	Spec No	Mechanical Properties					
					Yield Strength (ksi)	UTS (ksi)	Elongation A50 (%)	Earing (%)	Test Date	Gauge Length (inches)
Spec	VBHF	39405039	6061	Min	35.1	42.0	8			
				Max	40.0	46.0	15		08/10/12	2
0870028C0	VBHF	39405039	6061	2	40.0	46.0	15		08/10/12	2

### CHEMICAL COMPOSITION

Cast No.	Alloy	Si (%)	Fe (%)	Cu (%)	Mn (%)	Mg (%)	Cr (%)	Zn (%)	Ti (%)	Each (%)	Total (%)	Al (%)
Min		0.40	0.7	0.15	0.15	0.8	0.04	0.25	0.15	0.05	0.15	
Max		0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15	
VBHF	6061	0.70	0.42	0.50	0.11	1.04	0.20	0.06	0.011			97.13

CONFORMS TO: ASME SA-208 ASTM A201 ALUMINUM 6061-T651, 08/1997

For purposes of determining conformance with these specifications, an observed value of a calculated value shall be rounded to the nearest unit in the last right-hand digit used in expressing the specification limit, in accordance with the rounding method of ASTM Practice E29, for using significant digits in test data to determine conformance with specifications.  
WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED ABOVE HAS BEEN TESTED AND COMPLEIES WITH THE TERMS OF THE ORDER CONTRACT. THE INSPECTION RESULTS INDICATED IN THE CHEMICAL COMPOSITION HAVE BEEN OBTAINED FROM CAST ANALYSIS.

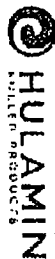
Dr. A. Pflaender (HEAD OF CHEMICAL TESTING)

Ver 2.8.0

V. Marnett (HEAD OF PHYSICAL TESTING)

DAS 14 13/01/30

HEAD OFFICE: 40000 Highway 101, P.O. Box 74, Piquetteburg 43094, OHIO  
Telephone: (419) 333-3333 • Telex: 333333 • Fax: (419) 333-3333



ALUMINUM PRODUCTS

# THYSSENKRUPP MATERIALS NA

PO/Rel 18936

**DART AEROSPACE**  
ALUMINUM SQUARE BAR 6061-T6511  
1.250" X 1.44.0000"  
PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

**Certificate of Mill Test Results**  
BL PEC-805103-013  
28Jan13  
Pg 1/1

## EXTRUDEX

ALUMINUM

TEL: (416)745-4444 FAX: (416)745-0925 1-800-668-7210  
411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4  
<http://www.extrudex.com>

### MILL TEST REPORT

BILL TO	Cart Code:	DIE NUMBER	DATE OF SHIPMENT	EXTRUDEX ORDER NO.	MANIFEST NO.
THYSSENKRUPP MATERIALS,NA	1	S	10/2/2012	150508	7
SHIP TO	CUSTOMER PO	ALLOY	TEMPER	SALESMAN	
THYSSENKRUPP MATERIALS,NA	PEC-242176	6061	T6511	FORBES DODWELL	
SO DESCRIPTION	CUSTOMER PART NUMBER	PART DESCRIPTION			
1.25" SQ	3-1250				
				CERTIFICATION	
				MILL TEST ASTM B221-12	

### Mechanical Properties

Lot	Alloy	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation	Hardness	Conductivity
A.11	6061	Oct/02/12	43.2	38.9	14.80	91.9,92.3,91.2	

### Chemical Composition

Cast Number	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Ga	V	B	Zr	Bi	Pb	Sn	Sr	Co	Al	Other
A.11	2BR922	6061	0.57	0.17	0.21	0.01	0.87	0.07	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



David Natale  
Quality Control Manager

DAS  
14  
9-89  
13/01/30

# THYSSENKRUPP MATERIALS NA

## Certificate of Mill Test Results

DART AEROSPACE

ALUMINUM FLAT BAR 6061-T6511

1.250" x 1.50" X 144.0000"

PART NO.

PO/Rel 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

BL PEC-805103-014

28Jan13

Pg 1/2

Signed by: \_\_\_\_\_

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
5205 KAISER DRIVE  
KALAMAZOO, MI 49048

### CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

CUSTOMER PO NUMBER: PEC-244210-3		CUSTOMER PART NUMBER: ALREC00007		PRODUCT DESCRIPTION: 1.250 X 1.500 SC RECT BAR	
KAISER ORDER NUMBER: 633256	LINE ITEM: 003	SHIP DATE: 12/07/2012	KAISER LOT NUMBER: Z00261029	ALLOY: 6061	TEMPER: T6511
WEIGHT SHIPPED: 952.000 LB	QUANTITY: 36.000 PCS	B/L NUMBER: 605071	DIAM/DAF/THKNS:	WIDTH:	LENGTH: 12.000 FT
SHIP TO:  THYSSENKRUPP MATERIALS NA 2821 LANGSTAFF ROAD CONCORD, ON L4K 5C6 CANADA			SOLD TO:  THYSSENKRUPP MATERIALS NA 2821 LANGSTAFF ROAD CONCORD, ON L4K 5C6 CANADA		

### Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONDUCT.	BEND
Z0C261029	0001	1	48.7	46.1	17.3	RE 93	N/A	N/A
Z0C261029	0001	2	46.2	43.1	14.2	RE 92	N/A	N/A
Z0C261029	0001	3	47.8	45.0	13.4	RE 92	N/A	N/A
Z0C261029	CC01	4	46.5	43.5	16.9	RE 91	N/A	N/A
Z0C261029	CC01	5	46.9	43.8	16.4	RE 90	N/A	N/A

### Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.30	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.30	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
102122	.70	.28	.24	.09	.91	.09	.02	.03	.00	.00	.00	.01	.03

### Applicable Requirements:

ASTM-B221-12 STENCILED ASME-SB221 1998 SECT II AMS-QQ-A-200/8 (2007) UNS#A96061  
(T6511 also conforms to T6-not applicable to other tempers)

### Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA

DAS  
14  
2-89 13/01/30

Plant Serial: 00069563

Kaiser Order Number: 633256

Line Item: 003

# THYSSENKRUPP MATERIALS NA

DART AEROSPACE

ALUMINUM FLAT BAR 6061-T6S11  
1.250" x 1.50" X 144.0000"  
PART NO.

PO/Rel 18936

We certify that this is a true copy of the report  
furnished by the producer of the metal, or data  
resulting from tests made in approved labs.

## Certificate of Mill Test Results

BL PEC-805103-014

28Jan13

Signed by: \_\_\_\_\_

Pg 2/2

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
5205 KAISER DRIVE  
KALAMAZOO, MI 49048

*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

### CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Calvin Latting, Quality & Technology Manager

*Calvin Latting*

Plant Serial: 00069563

Kaiser Order Number: 633256

Line Item: 003

Page 2 of 2



# THYSSENKRUPP MATERIALS NA

DART AEROSPACE

ALUMINUM SQUARE BAR 6061-T6511  
2.00" X 144.0000"  
PART NO.

PO/Ref 18936

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

Certificate of Mill Test Results  
BL PEC-805103-015  
281 am13  
Pg 1/1



SERVICE CENTER METALS  
5850 Quality Way  
Prince George, VA 23875

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

OUR ORDER NUMBER	ITEM
163679	6

BILL TO	MANIFEST NUMBER	DATE OF SHIPMENT	CERTIFICATION
ThyssenKrupp Materials NA	175459	11/30/2012	ASTM-B221-12 StencilContinuous
SHIP TO	CUSTOMER PO	SALES PERSON	SPECIFICATION
ThyssenKrupp Materials NA PEC	PEC-243803	David Schroeder	AMS-QQA-200/8
Quantity Certified	CUSTOMER PART NUMBER	DESCRIPTION	
3,084 lbs	SC0044	SCSB 2.000	

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown.

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6

### Mechanical Properties

Tests	Lot No.	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation
91	201219894	11/16/12	50.0	46.8	11.5
92	201219894	11/16/12	50.7	47.1	16.9
93	201219894	11/20/12	49.5	45.8	12.2
94	201219894	11/20/12	50.4	46.9	13.2
95	201219894	11/21/12	48.1	44.2	14.9

DA 14 88

13/01/30

### Chemical Composition for Aluminum Alloy 6061

Cast Number	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Others	Each	Total	Melt Source:
1112006	6061	0.71	0.37	0.31	0.09	0.85	0.10	0.04	0.03	97.50	0.05	0.15		United States of America

Print Date: 11/30/2012

Calvin J. Wladys, Director of Quality & Technical Services

Rev. 8/23/10 LMS

# THYSSENKRUPP MATERIALS NA

PO/Rel 18936

Certificate of Mill Test Results

BL PEC-805103-016

28Jan13  
Pg 1/1

DART AEROSPACE  
ALUMINUM PLAT BAR 6061-T6511  
2.00" X 8.00" X 144.0000"  
PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

## SERVICE CENTER METALS

5850 Quality Way  
Prince George, VA 23875

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS



OUR ORDER NUMBER	ITEM
159338	4

BILL TO	MANIFEST NUMBER	DIE NUMBER	DATE OF SHIPMENT	CERTIFICATION
ThyssenKrupp Materials NA	170434	PL0745	9/27/2012	ASTM-B221-12 StencilContinuous
SHIP TO	CUSTOMER PO	ALLOY / TEMPER	SALESPERSON	SPECIFICATION
ThyssenKrupp Materials NA PEC	PEC-242175	6061-T6511	David Schroeder	AMS-QQA-200/8
Quantity Certified	1,129 lbs	5 pcs	CUSTOMER PART NUMBER	DESCRIPTION
			PL0745	PL 2,000x8,000

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown.

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6

### Mechanical Properties

Tests	Lot No.	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation
91	201201586	01/31/12	48.8	45.5	14.0
92	201201586	01/31/12	47.9	44.7	15.0

13/01/30  
DAS  
148

### Chemical Composition for Aluminum Alloy 6061

Cast Number	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Others	Melt Source:
											Each	Total
110312	6061	0.76	0.35	0.32	0.12	0.91	0.18	0.05	0.02	97.29	0.05	0.15
112714	6061	0.77	0.36	0.34	0.11	0.88	0.15	0.05	0.02	97.32	0.05	0.15

United States of America  
United States of America

Print Date: 9/27/2012

Calvin J. Wiggins, Director of Quality & Technical Services

Rev. 9/23/11 - JWS

# Certificate of Mill Test Results

PI BEC 805103 017

**Signed by:**

28Jan13  
Pos 1/1

TEL: (416) 745-4444 FAX: (416) 745-0925 1-800-668-7210  
411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 8N4

<http://www.extrudex.com>

<b>EXTRUDEX ORDER NO.</b>	<b>MANIFEST NO.</b>
---------------------------	---------------------

150402 — 3 275290  
MADE IN CANADA  
CERTIFICATION  
MILL TEST ASTM B21-12

## Conductivity

87.5 88.0 87.8

Si	0.60	Fe	0.19	Cu	0.21	Mn	0.04	Mg	0.87	Cr	0.07	Ni	0.00	Zn	0.01	Ti	0.01	Ga	0.00	V	0.00	B	0.00	Zr	0.00	Bi	0.00	Pb	0.00	Sb	0.00	Sr	0.00	Co	0.00	Al	0.00	Other	0.02
----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	---	------	---	------	----	------	----	------	----	------	----	------	----	------	----	------	----	------	-------	------

DAS 14 9-89 13/01/30



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO18936**

Purchase Order Date 1/24/13

PO Print Date 1/24/13

Page Number 1 of 4

**Order From :**

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275 POSTAL "A"  
TORONTO, ON M5W 5V8  
CA

**Contact Name**

**Vendor Phone** 905 669 9444

**Vendor Fax** 905 738 9033

**Vendor Account Nbr**

**Buyer**

Chantal Lavoie

**Requisition Nbr**

**Tax Resale Nbr**

10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

**Ship To :**

DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**FAKED**  
01/30/13

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M6061T6B0.250X02.500	6061-T6 Bar 0.250 x 2.500	1/30/13 Yes	✓ 20.00 f	Yours ppd	\$1.5000	\$30.00
		<b>Special Instructions:</b> MATERIAL: 6061-T6/T651/T6510/6511/T62 ALUMINUM BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221					
2	M6061T6B0.250X04.000	6061-T6 Bar .250 x 4.000	1/30/13 Yes	✓ 12.00 f	Yours ppd	\$2.3333	\$28.00
		<b>Special Instructions:</b> SAME AS ABOVE					
3	M6061T6B0.375X01.000	6061T6 BAR .375 x 1.000	1/30/13 Yes	✓ 12.00 f	Yours ppd	\$0.8333	\$10.00
		<b>Special Instructions:</b> SAME AS ABOVE					

SPB-01-30

No substitution or deviation without consent.  
Certificate of Conformity or Material Certification required **YES** NO

Change Nbr: 1

Change Date: 1/24/13



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO18936

Purchase Order Date 1/24/13

PO Print Date 1/24/13

Page Number 2 of 4

Order From :

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275, POSTAL "A"  
TORONTO, ON M5W 5V8  
CA

Contact Name

Vendor Phone

905 669 9444

Vendor Fax

905 738 9033

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

4	M6061T6B0.375X03.000	6061T6 BAR .375 X 3.00	1/30/13 Yes	✓ 12.00 f	Yours ppd	\$2.6667	\$32.00
		Special Inst: SAME AS ABOVE					
5	M6061T6B0.500X02.500	6061-T6 Bar .500 x 2.50	1/30/13 Yes	✓ 12.00 f	Yours ppd	\$3.0000	\$36.00
		Special Inst: SAME AS ABOVE					
6	M6061T6B0.750X00.750	6061-T6 Bar .750 x .750	1/30/13 Yes	✓ 12.00 f	Yours ppd	\$1.3333	\$16.00
		Special Inst: SAME AS ABOVE					
7	M6061T6B0.750X04.000	6061-T6 Bar .750 x 4.00	1/30/13 Yes	✓ 12.00 f	Yours ppd	\$7.1667	\$86.00
		Special Inst: SAME AS ABOVE					
8	M6061T6B00750X00.125	6061-T6 Bar .750 x .125	1/30/13 Yes	✓ 100.00 f	Yours ppd	\$0.3550	\$35.50
		Special Inst: SAME AS ABOVE					
9	M6061T6B1.000X02.000	6061-T6 Bar 1.00 x 2.00	1/30/13 Yes	✓ 36.00 f	Yours ppd	\$4.8500	\$174.60
		Special Inst: SAME AS ABOVE					

SP13-9-30

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required - YES NO

Change Nbr: 1

Change Date: 1/24/13



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO18936**

Purchase Order Date 1/24/13

PO Print Date 1/24/13

Page Number 3 of 4

**Order From :**

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275, POSTAL "A"  
TORONTO, ON M5W 5V8  
CA

**Contact Name**

**Vendor Phone**

905 669 9444

**Vendor Fax**

905 738 9033

**Vendor Account Nbr**

**Buyer**

Chantal Lavoie

**Requisition Nbr**

**Tax Resale Nbr**

10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

		<b>Special Inst:</b>	SAME AS ABOVE					
10	M6061T6B1.000X02.500	6061-T6 Bar 1.00 x 2.50	1/30/13 Yes	✓ 12.00 f	Yours ppd	\$5.8333		\$70.00
		<b>Special Inst:</b>	SAME AS ABOVE					
11	M6061T6B1.000X12.000	6061-T6 Bar 1.00 x 12.00	1/30/13 Yes	✓ 12.50 f	Yours ppd	\$28.2353		\$352.94
		<b>Special Inst:</b>	SAME AS ABOVE					
12	M6061T6B1.000X15.000	6061-T6 Bar 1.00 x 15.00	1/30/13 Yes	✓ 12.50 f	Yours ppd	\$47.7400		\$596.75
		<b>Special Inst:</b>	SAME AS ABOVE					
13	M6061T6B1.250X01.250	6061-T6 Bar 1.25 x 1.25	1/30/13 Yes	✓ 48.00 f	Yours ppd	\$3.6670		\$176.02
		<b>Special Inst:</b>	SAME AS ABOVE					
14	M6061T6B2.000X02.000	6061-T6 Bar 2.00 x 2.00	1/30/13 Yes	✓ 36.00 f	Yours ppd	\$9.3889		\$338.00
		<b>Special Inst:</b>	SAME AS ABOVE					
15	M6061T6B1.500X01.250	6061-T6 Bar 1.50 x 1.25	1/30/13 Yes	✓ 36.00 f	Yours ppd	\$4.5500		\$163.80

SPB-01-30.

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required **YES** NO

Change Nbr:

1

Change Date: 1/24/13



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO18936**

Purchase Order Date 1/24/13

PO Print Date 1/24/13

Page Number 4 of 4

Order From : VC-COP001  
THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275, POSTAL "A"  
TORONTO, ON M5W 5V8  
CA

Contact Name  
Vendor Phone 905 669 9444  
Vendor Fax 905 738 9033  
Vendor Account Nbr

Buyer Chantal Lavoie  
Requisition Nbr  
Tax Resale Nbr 10127-2607  
Terms Net 30  
Currency CAD  
FOB Destination-Collect

Special Inst: SAME AS ABOVE

16	M6061T6B2.000X08.000	6061-T6 BAR 2.00' X 8.00"	1/30/13	12.00	Yours ppd	\$37.6667	\$452.00
			No	f			

Special Inst: SAME AS ABOVE

17	M6061T6B1.500X02.500	6061-T6 Bar 1.50' X 2.50"	1/30/13	36.00	Yours ppd	\$8.8333	\$318.00
			Yes	f			

Special Inst: SAME AS ABOVE

PO Total: \$2,915.61

SP 13-01-30

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

Change Nbr: 1

Change Date: 1/24/13

No substitution or deviation without consent.  
Certificate of Conformity or Material Certification required - YES NO